

REMARKS

Favorable reconsideration and allowance of the claims currently pending in the subject application in view of the following remarks are respectfully requested.

Claims 1 and 15-35 are currently pending in this application.

The Examiner has rejected Claims 1, 15 and 18-35 under 35 U.S.C. §103 as being obvious over Tittle U.S. Patent No. 4,886,590 ("Tittle '590") in view of Tittle U.S. Patent No. 4,950,610 ("Tittle '610"). This rejection is respectfully traversed.

Nowhere does Tittle '590 disclose or suggest a process for the automatic determination of the alkalinity of one or more cleaning baths containing a surfactant comprising, *inter alia*, "determining alkalinity of a sample using an acid-base reaction with an acid and adding one or more replenishing components to the cleaning bath if the result of the determined alkalinity is below a preset value" as generally recited in Claim 1.

Rather, Tittle '590 discloses a microscopic-based apparatus for measurement and correction of a process solution by analyzing the chosen characteristics to be controlled for a bath and comparing measurements to established, acceptable characteristic limits and making necessary corrections if needed. Moreover, contrary to the Examiner's assertion in the Office Action that Tittle '590 discloses determining the alkalinity of the sample using titration, Tittle '590 instead discloses that the micro-based apparatus monitors acidity or residual etching capacity (i.e., the total acidity) of a bath using titration (see column 4, lines 57-63). The primary goal of Tittle '590 is therefore to monitor acidity or the total acidity of a bath using titration and not to determine the alkalinity of a cleaning bath using an acid-base reaction with an acid and

add one or more replenishing components to the cleaning bath if the determined alkalinity is below a preset value, as generally recited in claim 1. Thus, it is not seen where Tittle '590 provides any suggestion or motivation for determining the alkalinity of a cleaning bath using an acid-base reaction with an acid and adding one or more replenishing components to the cleaning bath if the determined alkalinity is below a preset value.

To remedy the deficiencies of Tittle '590, the Examiner alleges in the Office Action that the titration technique of using an acid-base reaction with an acid is notoriously well-known in the art, as evidenced by Tittle '610. Hence, a person of ordinary skill in the art would have recognized the suitability of utilizing the titration technique of Tittle '610 with the process disclosed by Tittle '590 for the intended purpose of facilitating effective alkalinity determination.

It is respectfully submitted that Tittle '610 does not cure the deficiencies of Tittle '590. In particular, nowhere does Tittle '610 disclose or suggest a process for the automatic determination of the alkalinity of one or more cleaning baths containing a surfactant comprising, *inter alia*, determining alkalinity of a sample using an acid-base reaction with an acid ... and ... adding one or more replenishing components to the cleaning bath if the result of the determined alkalinity is below a preset value, as generally recited in Claim 1.

Rather, Tittle '610 merely discloses a titration apparatus and method. There is no suggestion, motivation, or even a hint in Title '610 of the specifically recited steps of determining alkalinity of a sample using an acid-base reaction with an acid ... and ... adding one or more replenishing components to the cleaning bath if the result of the determined alkalinity is

below a preset value in a process for the automatic determination of the alkalinity of a cleaning bath containing a surfactant as essentially set forth in Claim 1.

Most, if not all, inventions arise from a combination of old elements. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998). However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *Id.* Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the Applicants. *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Accordingly, the steps of the present process, as set forth in the present claims, employs a procedure which starts itself automatically and subsequently makes a decision based on the result of the alkalinity determination to decide independently from any human interaction if and to what extent a replenishment of replenishing components should be added to the cleaning bath. There is no remote suggestion, motivation or even a hint in Tittle '610 of employing these steps in an automated process as essentially set forth in Claim 1. Thus, nothing in Tittle '610 would lead one skilled in the art to modify the process of Tittle '590 by looking to Tittle '610 and arrive at the presently claimed process with any expectation of success.

The Examiner further alleges in the Office Action that a person of ordinary skill in the art would have had a reasonable expectation of success of utilizing the titration technique disclosed by Tittle '610 for facilitating the effective alkalinity determination of a sample since

the Courts have held that the prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success (citing *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) (see MPEP §2143.02)). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the titration technique disclosed by Tittle '610 with the methodology disclosed by Tittle '590 for facilitating the effective alkalinity determination of the sample.

However, as the court pointed out in *In re Lee*, 277 F.3d 1338, 1342-43, 61 USPQ2d 1430, 1433-34 (CAFC 2002), there must be some teaching, motivation or suggestion to select and combine references relied upon as evidence of obviousness. As is the case here, Tittle '610 provides no such teaching, motivation or even a suggestion of the steps of determining the alkalinity of a sample using an acid-base reaction with an acid...and...adding one or more replenishing components to the cleaning bath if the result of the determined alkalinity is below a preset valve in an automatic process for the determination of the alkalinity of one or more cleaning baths containing a surfactant as essentially set forth in the present claims.

As previously discussed hereinabove, Tittle '610 is directed to a titration apparatus and at no point provides any such suggestion, motivation or even a hint of an automatic determination of the alkalinity of one or more cleaning baths containing a surfactant and replenishing said bath as necessary by determining alkalinity of the sample using an acid-base reaction with an acid and adding one or more replenishing components to the cleaning bath if the result of the alkalinity determination is below a preset value as set forth in the present claims. As such, one skilled in the art would not be motivated by Tittle '610 to modify the process of

Tittle '590 and arrive at the presently claimed process with any expectation of success.

Since Tittle '590, alone or in combination with Tittle '610, does not disclose or suggest a process for the automatic determination of the alkalinity of one or more cleaning baths containing a surfactant under program control, comprising the steps of, *inter alia*, determining alkalinity of the sample using an acid-base reaction with an acid ... and ... adding one or more replenishing components to the cleaning bath if the result of the alkalinity determination is below a preset value as generally recited in Claim 1, Claim 1 is believed to be nonobvious, and therefore patentable, over Tittle '590 and Tittle '610.

Claims 15 and 18-35 depend, directly or indirectly, from Claim 1. As such, these claims are believed to be allowable for at least the same reasons as given above for Claim 1.

The Examiner has rejected Claims 16 and 17 under 35.U.S.C.§103(a) as being obvious over Tittle '590 in view of Tittle '610, as applied to Claims 1, 15 and 18-35 above, and further in view of Rolchigo et al. U.S. Patent No. 5,820,690A ("Rolchigo"). This rejection is respectfully traversed.

The foregoing deficiencies of Tittle '590 and Tittle '690 discussed above with respect to the rejection of Claim 1 apply with equal force to this rejection. As the combination of Tittle '590 and Tittle '610 does not disclose or suggest each of the steps recited in Claim 1, the combination of Tittle '590 and Tittle '610 cannot possibly disclose or suggest the steps of Claims 16 and 17, which ultimately depend from Claim 1.

Rolchigo does not cure and is not cited as curing the deficiencies of Tittle '590 and Tittle '610. Specifically, nowhere does Rolchigo disclose or suggest a process for the automatic determination of the alkalinity of one or more cleaning baths containing a surfactant employing the steps of, *inter alia*, determining alkalinity of the sample using an acid-base reaction with an acid ... and ... adding one or more replenishing components to the cleaning bath if the result of the alkalinity determination is below a preset value as generally recited in Claim 1. Rather, Rolchigo is merely cited for its disclosure that a cleaning process can generate solid or aggregate particulate matter and the removal of this matter. In addition, Rolchigo is cited for the disclosure of "the use of titration in determining free and total alkalinity in determining cleaner activity" (see col. 10, lines 11-26). At no point, however, is it seen where Rolchigo provides any suggestion, motivation or even a hint of determining alkalinity of a sample using an acid-base reaction with an acid, much less adding one or more replenishing components to the cleaning bath if the result of the alkalinity determination is below a preset value. Instead, Rolchigo merely discloses a cleaning process to remove soil using cleaners exhibiting cloud point behavior. Thus, even by combining Tittle '590, Tittle '610 and Rolchigo one would not arrive at the presently claimed process for automatic determination of alkalinity of one or more cleaning baths containing surfactant comprising, *inter alia*, determining alkalinity of a sample using an acid-base reaction with an acid and adding one or more replenishing components to the cleaning bath if the result of the alkalinity determination is below a preset value.

For the foregoing reasons, Claims 16 and 17 are believed to be nonobvious, and therefore patentable, over Tittle '590 in view of Tittle '610 and in further view of Rolchigo.

Thus, withdrawal of the rejection of Claims 16 and 17 under 35 USC §103(a) is respectfully requested.

For the foregoing reasons, Claims 1 and 15-35 as presented herein are believed to be in condition for immediate allowance. Such early and favorable action is earnestly solicited.

Respectfully submitted,



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